

2013 SACCWIS Report

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SWRCB Meeting

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OTC Compliance and Infrastructure Planning

- SACCWIS review of adopted OTC facility compliance dates for infrastructure realities is a key element of adopted OTC policy.
- CAISO and state agencies now examining OTC facility retirement on rolling 10-year horizon.
- CAISO studies for San Diego and Los Angeles areas reveal major problems in San Diego and Orange County with SONGS outage/retirement.

Focus on CAISO local capacity areas and OTC plants



Note:
On June 7, 2013 SCE announced it would retire the San Onofre Nuclear Generating Station.

Implications of SONGS Retirement

- Both units at SONGS have been offline since January 2012 and SCE announced their retirement on June 7.
- The CAISO has completed both near-term (2013) and longer-term studies (2018, 2022) of reliability implications.
- San Diego area and Orange County are more adversely affected than is the Los Angeles Basin.
- In 2013, the CPUC is examining both additional local capacity requirements (in the LA Basin and San Diego) and overall impacts of SONGS retirement.

Key Near Term Actions to Mitigate Local Reliability Concerns in Southern Orange County and San Diego

- Reconfigured Barre – Ellis 220 kV lines from existing two circuits to four circuits – completed and in service June 12, 2013.
- Converted Huntington Beach units 3 & 4 into synchronous condensers –commercial operation June 28, 2013.
- Installed 80 MVAR capacitors at Santiago and Johanna substation and 2x80 MVAR capacitors at Viejo – in service May 2013.
- New resources South of Lugo fully available for use : 1) El Segundo repower (564 MW); 2) Sentinel (800 MW) fully available for use and 3) Walnut Creek (500 MW).
- Fully funded Flex Alerts and made plans to utilize available demand response.
- Ensure that existing generation is well-maintained and available.

Governor's Task Force

- The task force -- state energy and environmental agencies, the ISO and utilities -- will identify options for meeting reliability needs through:
 - preferred resources
 - transmission system upgrades
 - conventional generation
- The CEC and CPUC conducted a joint workshop in Southern California on July 15th focused on electric infrastructure issues resulting from SONGS and OTC policy-induced closures.
- A task force plan should be ready for public release in mid-September, with regulatory deliberations to follow.
- Additional CEQA/Permitting and contract approval will be needed for most projects.

CEC Actions Since 2012 Report

- On May 31, 2012, the CEC permitted Carlsbad, a 560MW combined cycle at the Encina site.
- On September 12, 2012, the CEC permitted Pio Pico, a 300MW simple cycle project adjacent to the Otay Mesa power plant in southern San Diego County.
- The CEC has applications for certification:
 - Underway for Huntington Beach and Redondo Beach repowering projects,
 - Recently received for El Segundo 4, and
 - Suspended at developer's request for Quail Brush.

CPUC Actions Since 2012 Report

- In separate decisions the CPUC authorized:
 - SCE to procure 1400-1800 MW of new resources in the LA Basin and 215 to 290 MW in Big Creek / Ventura, and
 - SDG&E to procure 350 MW of new resources, including the repower of 45 MW at Escondido.
- The CPUC is conducting examinations of the SONGS outage in proceedings:
 - SONGS OII is investigating costs of alternative power.
 - Track 4 of the 2012 LTPP rulemaking will examine the need for additional resources to replace SONGS.

CAISO Actions Since 2012 Report

- Conducted several preliminary LCR analyses assuming SONGS is offline.
- Refined its operating practices to minimize impacts.
- Completed some transmission system upgrades .
- Pursuing:
 - Dynamic reactive support near SONGS switchyard and the Talega or San Luis Rey substations, and
 - The Sycamore-Penasquitos transmission line, to improve dynamic support
- Studying major transmission upgrades.

----- operating -----

- Pittsburg (2017)
- Moss Landing (2017)
- Morro Bay (2015)
- Diablo Canyon (2024)
- Mandalay (2020)
- Ormond Bch (2020)
- El Segundo 4 (2015)
- Scattergood (2015&24)
- Redondo Bch (2020)
- Harbor (2029)
- Alamitos (2020)
- Haynes (2013, 2029)
- Huntington Bch 1-2 (2020)
- Encina (2017)

----- retired -----

- Humboldt Bay (2010)
- Contra Costa (2017)
- Huntington Bch 3-4 (2012)
- Potrero (2010)
- El Segundo 3 (2015)
- San Onofre (2022)**
- South Bay (2010)

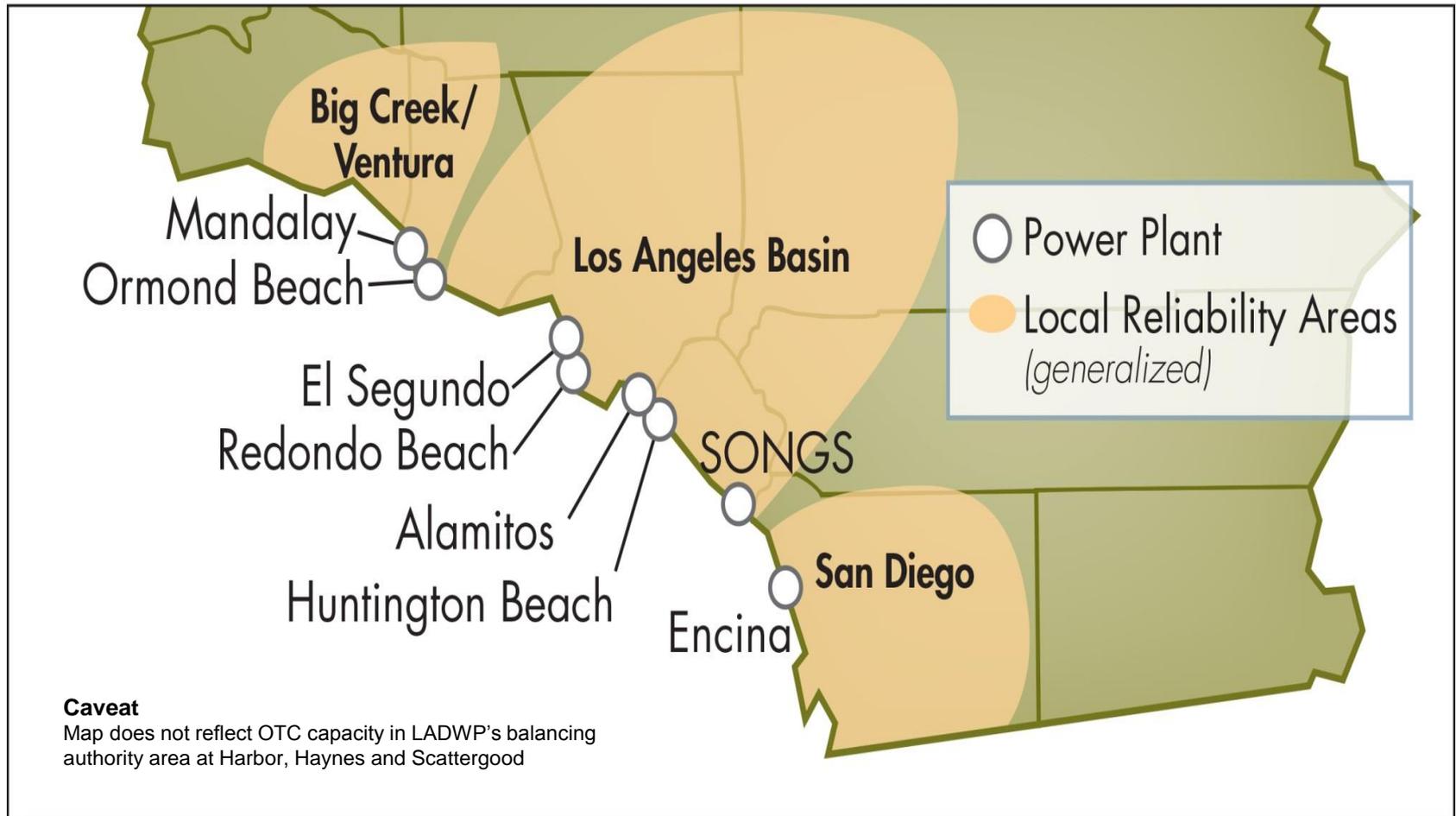
OTC Power Plant Status



SACCWIS Has Focused Attention on Facilities with 2015-17 Compliance Dates

- El Segundo (2015)
- Encina (2017)
- Contra Costa (2017)
- Pittsburg (2017)
- Moss Landing (2017)
- Morro Bay (2015)

Los Angeles Basin and San Diego Local Capacity Areas



El Segundo (2015)

- El Segundo 3-4 are twin 335MW steam boilers – two older, smaller units have already retired.
- El Segundo unit 3 retired July 10 after the second combined cycle of the repowering project came online.
- NRG in its April 2011 plan indicated it wanted to repower Unit 4 and requested an extension until 2017. In a subsequent January 2013 letter, NRG indicated it will retire Unit 4 no later than December 2015.
- On April 23, NRG filed a permit modification request with the CEC to repower Unit 4.

Encina (2017)

- Encina consists of 5 units totaling 960MW.
- NRG compliance strategy:
 - In its April 2011 OTC Implementation Plan, NRG proposed to replace Encina 1-3 with Carlsbad, and to implement Track 2 measures for Encina 4-5
 - In March 2013, NRC revised its OTC compliance strategy for Encina 4-5 and now says they will retire on 12/31/2017.
- CAISO local capacity studies show that without SONGS either Encina or equivalent capacity is needed, implying an extension of Encina compliance.

Contra Costa (2017)

- Contra Costa 6-7 are twin 340MW steam boilers drawing cooling water from Sacramento/San Joaquin confluence.
- Contra Costa 6-7 retired 5/1/2013 when Marsh Landing became operational.
- Marsh Landing consists of four 190MW air-cooled gas turbines.

Pittsburg (2017)

- Units 5-6 are twin 340MW steam boilers with OTC, while unit 7 is 720MW with evaporative cooling towers.
- Pittsburg is not required for local capacity reasons once transmission upgrades occur.
- Upgrades may be built later than originally planned, so one or more Pittsburg units may need a compliance date extension.
- Unit 7 cannot operate independent of Units 5 or 6, so Pittsburg operation implies reliance upon an OTC unit.

Moss Landing (2017)

- Moss Landing is the single largest power generating facility in California (2500MW).
 - Units 6-7 are old steam boilers, 750MW each.
 - Units 1-2 are new combined cycles, 500MW each.
- SACCWIS believes that the Moss Landing situation bears watching and specific recommendations to revise dates may be forthcoming later in 2013.

Morro Bay (2015)

- Morro Bay consists of twin 338MW steam boilers.
- Morro Bay is not a critical facility from either a local or zonal perspective, so it is likely to simply retire on or before its 2015 compliance date.

Conclusion

- No explicit recommendations for compliance date changes are proposed at this time.
- The SONGS retirement increases need for either existing OTC units or replacements.
- Further analyses are needed to understand the extent of reliance upon existing OTC units. Some are underway now.
- Technical staff of the energy agencies need to undertake specialized studies that support compliance date changes.

SACCWIS Recommendations

- The Water Board should recognize that it may be necessary to modify final compliance dates for generating units, especially those in Southern California.
- The Water Board should require generators to explain:
 - Their intentions for the OTC facilities,
 - The status of any necessary permitting, contractual, and regulatory activities to repower, retrofit, or retire these generating facilities, and
 - Provide a detailed schedule by unit if they intend to either repower or retrofit.
- Facilities with near-term facilities should file such data ASAP, while those with longer-term dates can be submitted later.